

REMARKS/ARGUMENTS

In view of the foregoing amendments and following remarks, favorable reconsideration of the claims is respectfully requested.

Claims 1 – 5, 7 – 10, 26, and 27 are currently pending. Claims 6 and 11 – 25 have been cancelled.

To further clarify the claimed invention, Claim 1 has been amended to recite that the binder is selected from the group consisting of methylcellulose and methylcellulose derivatives. Support for this amendment can be found in Claims 2 and 3, which have been cancelled. Claim 1 has also been amended to recite that the board has a uniform density. Support for this amendment can be found, for example, on page 4, lines 9 – 11. Claim 4 has been amended to depend directly on Claim 1.

Claims 1 – 5, 7 – 10, 26, and 27 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of U.S. Patent No. 6,585,842 to Bompard, U.S. Patent No. 5,439,627 to De Jager, and U.S. Patent No. 5,273,821 to Olson et al.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim elements. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

1. The combination of Bompard, De Jager and Olson does not teach the claimed invention

Independent Claim 1 has been amended to recite that the batting board has a uniform density. Bompard, the primary reference relied on in the rejection, describes a plurality of unidirectional sheets that are formed from tows of filaments that are spread so as to form a unidirectional sheet. Each tow in turn is composed of thousands of individual filaments. As

shown in FIG. 1, these filaments are distributed in tightly packed bundles that are spread out and bonded to adjacent filament bundles. As a result, the composite sheet material of Bompard, even as modified by Olson and De Jager, would not have a uniform density. Rather, the density of the sheet material would be greater in regions wherein the filaments are formed in bundles and less dense in the regions between adjacent filament bundles. As such, the combination of the references fails to disclose or suggest a sheet material having a uniform density.

2. There is no motivation to combine the references as contemplated by the Examiner

Olson describes a ceramic fiber board having a polyvinyl alcohol (PVA) binder that dissolves when heated and has a density that is less than 22 lb/ft³. Intended uses for Olson's fiber boards include high temperature insulation applications such as steel splash boards, oven or furnace linings, casting setters or casting tips. Bompard is not directed to insulative fiber boards or insulative applications. Rather, Bompard is directed to relatively heavy and dense composite sheet material that can be useful for making fiber reinforced material parts, such as boat masts. Anyone with knowledge of boat masts would quickly appreciate that the construction of a boat mast is completely different than a material to be used in an insulative capacity. As such, the teachings of Bompard are directed to a significantly different objective and purpose than that of Olson and one of ordinary skill in the art to which Bompard is directed would not look to guidance from Olson. Accordingly, one of ordinary skill in the art would not be motivated to combine their disparate teachings.

Contrary to the assertions in the Office Action, one of ordinary skill in the art would not be motivated to modify Bompard to have the claimed density range. As discussed above, Bompard describes a relatively heavy composite sheet material that is useful in making articles, such as boat masts. Modifying Bompard to have the recited density would result in a composite material that would not have sufficient strength to support a sail, let alone a sail being driven by the wind. Further, Bompard teaches that its composite sheet material comprises filaments that are arranged in tows having from 12K to 480K filaments in each tow. See column 4, lines 41-47. Bompard also teaches that the tows are "relatively heavy". See column 5, lines 16 - 17. Although, the Examples are generally directed carbon fiber tows, it is readily apparent that

Bompard teaches a composite sheet that is relatively dense and heavy. From the intended use of Bompard's sheet material, it does not make sense that one would modify the sheet material of Bompard to have a density less than 22 lb/ft³. In fact, it is reasonable to assume that such a density would make the sheet material of Bompard unsatisfactory for its intended purpose because lowering the density would result in a change in the strength to weight ratio of Bompard's sheet material. As a result, one of ordinary skill in the art would not be motivated to modify the sheet material of Bompard to have a density that is between 5 lbs/ft³ and about 24 lbs/ft³.

Finally, in making the rejections, it is clear that the Examiner has attempted to reconstruct the claimed invention by cherry picking select teachings of the cited references. As discussed previously, the cited references provide no motivation to modify Bompard. The Examiner's assertion that PVA is equivalent to methylcellulose is completely irrelevant because the Examiner has provided no reasonable explanation as to why one of ordinary skill in the art would modify Bompard to have the claimed density range. This is particularly true since the very purpose of Bompard would teach away from such modification. It is abundantly clear that the Examiner is using the benefit of the Applicants' teachings to arrive at the claimed invention, which amounts to the impermissible use of hindsight. As such, Applicant respectfully requests that the Examiner withdraw the rejections based on the combination of Bompard, De Jager, and Olson.

In view of the foregoing amendments and remarks, it is respectfully submitted that the rejections under 35 U.S.C. § 103 have been overcome.

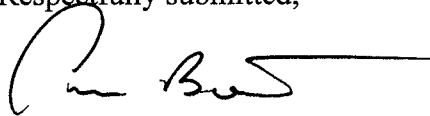
Conclusion

In view of the amendments and remarks made above, Applicant submits that the pending claims are in condition for allowance. Applicant respectfully requests that the claims be allowed to issue. If the Examiner wishes to discuss the application or the comments herein, the Examiner is urged to contact the undersigned attorney by telephone at 704-444-1185 to expedite prosecution of this application.

Appl. No.: 10/676,506
Amdt. dated 10/31/2007
Reply to Office Action of 07/26/2007

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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